

CLAIMS:

What is claimed is:

1. A method for providing enhanced error information for duplicated addresses
5 in a computer network, comprising the steps of:
receiving a plurality of packets encoded according to a first protocol,
said packets encapsulating data encoded according to a second protocol;
extracting a first source address from said packets according to said
first protocol;
10 determining that said first source address is a substantial duplicate of
a known assigned address;
responsive to determination of said first source address being a
duplicate address, extracting a second source address from said encapsulated
data according to said second protocol; and
15 providing said first source address and said second source address to
an error log which is reviewable by a system administrator in order to
facilitate correction of said duplicate assigned address.
2. The method as set forth in Claim 1 wherein said first protocol is selected from
20 the group of Ethernet, Bluetooth, Universal Serial Bus, Internet Protocol,
Wireless local area network, Point-to-Point Protocol, Fiber Distributed Data
Interface, Asynchronous Transfer Mode, and Fiber channel.

3. The method as set forth in Claim 1 wherein said second protocol is selected from the group of Ethernet, Bluetooth, Universal Serial Bus, Internet Protocol, Wireless local area network, Point-to-Point Protocol, Fiber Distributed Data
5 Interface, Asynchronous Transfer Mode, and Fiber channel.
4. The method as set forth in Claim 1 further comprising the steps of:
extracting one or more subsequent source addresses from data further
encapsulated by said second protocol according to one or more subsequent
10 protocols; and
providing said subsequent source addresses in an error log.
5. The method as set forth in Claim 1 wherein said step of extracting a second
source address from said encapsulated data according to said second protocol
15 comprises automatically determining the format of said second protocol based
upon an analysis of data encapsulated in said packets, and by comparison to
data patterns for known protocols.
6. The method as set forth in Claim 1 further comprising the steps of:
20 using said extracted second source address in a name server query;
receiving a name associated with said first source address in response
to said name server query; and

providing said received name in said error log.

7. The method as set forth in Claim 6 wherein said step of using said extracted
second source address in a name server query comprises using said second
5 source address in an Internet Domain Name Service Query.
8. The method as set forth in Claim 1 further comprising the step of
commanding one or more devices sharing said duplicate address to assume an
alternate network address.
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9. A computer readable medium encoded with software for providing enhanced
error information for duplicated addresses in a computer network, said
software performing the steps of:
- 15 receiving a plurality of packets encoded according to a first protocol,
said packets encapsulating data encoded according to a second protocol;
extracting a first source address from said packets according to said
first protocol;
determining that said first source address is a substantial duplicate of
a known assigned address;
20 responsive to determination of said first source address being a
duplicate address, extracting a second source address from said encapsulated
data according to said second protocol; and

providing said first source address and said second source address to an error log which is reviewable by a system administrator in order to facilitate correction of said duplicate assigned address.

- 5 10. The computer readable medium as set forth in Claim 8 wherein said software is configured to extract said first source address according to a first protocol selected from the group of Ethernet, Bluetooth, Universal Serial Bus, Internet Protocol, Wireless local area network, Point-to-Point Protocol, Fiber Distributed Data Interface, Asynchronous Transfer Mode, and Fiber channel.
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11. The computer readable medium as set forth in Claim 8 wherein said software is configured to extract said second source address according to a second protocol is selected from the group of Ethernet, Bluetooth, Universal Serial Bus, Internet Protocol, Wireless local area network, Point-to-Point Protocol,
- 15 Fiber Distributed Data Interface, Asynchronous Transfer Mode, and Fiber channel.
12. The computer readable medium as set forth in Claim 8 further comprising software for performing the steps of:
- 20 extracting one or more subsequent source addresses from data further encapsulated by said second protocol according to one or more subsequent protocols; and

providing said subsequent source addresses in an error log.

13. The computer readable medium as set forth in Claim 8 wherein said software
for extracting a second source address from said encapsulated data according
5 to said second protocol comprises software for automatically determining the
format of said second protocol based upon an analysis of data encapsulated in
said packets, and by comparison to data patterns for known protocols.

14. The computer readable medium as set forth in Claim 8 further comprising
10 software for performing the steps of:
using said extracted second source address in a name server query;
receiving a name associated with said first source address in response
to said name server query; and
providing said received name in said error log.

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15. The computer readable medium as set forth in Claim 14 wherein said software
for using said extracted second source address in a name server query
comprises software for using said second source address in an Internet
Domain Name Service Query.

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16. The computer readable medium as set forth in Claim 9 further comprising software for commanding one or more devices sharing said duplicate address to assume an alternate network address.
- 5 17. A system for providing enhanced error information for duplicated addresses in a computer network, said system comprising:
- a packet receiver configured to receive a plurality of packets encoded according to a first protocol, said packets encapsulating data encoded according to a second protocol;
 - 10 a first protocol analyzer configured to extract a first source address from said packets according to said first protocol;
 - a duplicate address detector for determining that said first source address is a substantial duplicate of a known assigned address;
 - a second protocol analyzer for extracting a second source address from
 - 15 said encapsulated data according to said second protocol responsive to determination of said first source address being a duplicate address; and
 - a data logger configured to provide said first source address and said second source address to an error log which is reviewable by a system administrator in order to facilitate correction of said duplicate assigned
 - 20 address.
18. The system as set forth in Claim 17 wherein said first protocol analyzer is

configured to analyze data encoded according to a protocol selected from the group of Ethernet, Bluetooth, Universal Serial Bus, Internet Protocol, Wireless local area network, Point-to-Point Protocol, Fiber Distributed Data Interface, Asynchronous Transfer Mode, and Fiber channel.

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19. The system as set forth in Claim 17 wherein said second protocol analyzer is configured to analyze data encoded according to a protocol selected from the group of Ethernet, Bluetooth, Universal Serial Bus, Internet Protocol, Wireless Local Area Network, Point-to-Point Protocol, Fiber Distributed Data Interface, Asynchronous Transfer Mode, and Fiber channel.

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20. The system as set forth in Claim 17 further comprising one or more subsequent protocol analyzers configured to extract one or more subsequent source addresses from data further encapsulated by said second protocol according to one or more subsequent protocols such that said subsequent source addresses are provided in an error log.

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21. The system as set forth in Claim 17 wherein said second protocol analyzer is configured to automatically determine the format of said second protocol based upon an analysis of data encapsulated in said packets, and by comparison to data patterns for known protocols.

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22. The system as set forth in Claim 17 further comprising:

a name retriever adapted to use said extracted second source address in
a name server query; and

5 a name query response receiver for receiving a name associated with
said first source address in response to said name server query such that
said received name is provided in said error log.

23. The system as set forth in Claim 22 wherein said name retriever is
10 configures to use said second source address in an Internet Domain Name
Service Query.

24. The system as set forth in Claim 17 further comprising a networked device
commander configured to command one or more networked devices sharing
15 said detected duplicate address to assume an alternate address.